E-rate Deployed Ubiquitously (EDU) 2011 Pilot Program

ReNEW-Reinventing Education

Submitted by Barbara Schuler
Grants and Volunteer Coordinator, ReNEW Schools
Barbara@renewschools
Phone: 504-458-9662

December 10, 2010

(1) Full description of the current/planned Wireless Program

a. Nature of Wireless Program, extent that connectivity is interactive and utilizes the Internet

ReNEW's campus network connects school campuses, and consists of 150 staff devices and 540 student wireless laptop devices for on-campus use. The Wireless Program complements school connectivity by providing another 50 laptops for home use, with the main goal of providing extra time and access for our students in grades 3-8. One hundred percent (100%) of all units are interactive with technology staff being able to manipulate their security settings, content access, and user management. All devices (100%) utilize the Internet, and all are CIPA compliant. Currently 50 laptops in our inventory have been outfitted with overdrive devices that allow students to access the Internet from home. Our expansion plan includes adding another 550 laptops with wireless services, through additional overdrive devices. Student laptops and overdrive devices are available for students to check out for use at home on weekends and holidays.

b. How long the Wireless Program has been in operation and mobile wireless device being used

Planning for the Wireless Program began in June, 2010, with a target implementation deadline of August 23, 2010. ReNEW conducted a parent survey, and found that only 25% of all families of our 1200 student population have Internet access at home. On August 1, the first laptop for

off-campus use was prepared for a homebound student. It was put into service on August 23, 2010 and continues to serve as the main curriculum access tool for this student. In September 2010, the technology team worked with the organization's CEO and Finance and Operations Director to analyze the budget and available resources. Based on monies to support hardware and connectivity services, 50 laptop computers were piloted in the take-home program with mobile broadband wireless cards. This initial activity gave the technology team data on student Internet usage off campus, security effectiveness of laptops and wireless devices, and success of the Internet-based software in meeting the needs of students and boosting academic growth. In October, 2010, ReNEW switched from broadband cards to overdrive devices as a way to reduce student's ability to connect to unsecure, unapproved devices and content. The program is currently active and available, with plans to expand as funding becomes available.

c. Technical issues associated with implementing the Wireless Program, including an analysis of problems with availability of wireless access to students off school premises, how those issues are being addressed by the school

The technology team learned that the initial use of mobile broadband cards worked great to provide off-campus access to the Internet. However, they could also be removed and put into non-approved devices, allowing for abuse and waste. There was no way for ReNEW to monitor the use of the cards on non-approved websites. This challenge was corrected by switching to an overdrive device which can be password protected by the technology team to work with only specific student laptops. The team also initially did not lock down student laptop computers, so students had open access. The technology team fixed this issue by initiating Internet security within the browser, through the parental controls. Students may only access the 7 educational sites to which the district has active subscriptions. With both the initial use of broadband cards and with newer use of overdrive devices, there have been no connectivity problems. Interviews with parents and students after each checkout period have not revealed any connectivity problems to date.

d. Training has been or will be provided to teachers, students or parents to implement the Wireless Program

Minimal training is needed for students and parents to effectively use the Wireless Program at home, as our students are very familiar with the websites and programs being used; they utilize these same programs several times each week during school hours. With initial checkout of laptops and overdrives, student and their families are given a brief reminder on how to log in and work in the approved educational programs. They are reminded that the laptop device and overdrive will only access the Internet as a unit, and that the overdrive cannot be transferred to another device. They are also made aware that the school team will monitor their progress in online learning during the checkout period. Following periods of device use in students' homes,

the technology team analyzes student use and shares individual student data with instructional leaders and administrative staff, to make decisions about further checkouts. Those students who repeatedly check out laptop computers without logging time in the educational software will lose their chance to sign out equipment in the future. Parents are required to provide their signature at the time of checkout, stating they agree with the terms and conditions of use.

e. Extent to which the Wireless Program is integrated with federal, Tribal, state, regional or local governmental or non-profit initiatives to achieve educational or community access outcomes

The proposed Wireless Program aligns with the federal Enhancing Education Through Technology (EETT) goals. The primary EETT goal is "to improve student academic achievement through the use of technology in elementary schools and secondary schools." Additionally, EETT seeks to "to assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability."

The Wireless Program also helps to implement the Louisiana Department of Education Technology Standards for students, which state that by 8th grade, students will be proficient in a variety of technology skills, including hardware, software, and application use, and use of the Internet for research and support of core classes.

The Wireless Plan integrates into the school, district, and Louisiana state technology plans (all three are aligned), which advocate for availability and access to distance learning in all content areas. The state plan, for example, recommends to "give students the opportunity to expand learning opportunities by offering e-learning courses that help prepare them for high stakes testing (i.e., LEAP and GEE) and college placement testing (i.e., ACT)." A second recommendation is to "work to create and expand opportunities for distributing computers to low income students for home use."

The plan recommends that districts and schools "create e-learning opportunities that support goals and benchmarks provided by the state, district, and local levels" and increase after-hour technology access. ReNEW's Wireless Program uses Internet accessible software such as Plato that targets the same Louisiana Grade Level Expectations (GLEs) that will be tested on annual LEAP and iLEAP tests.

In the future, our off-campus laptops may support E-books, thus helping the district to reduce curriculum costs and improve the accessibility of learning content for students, both on and off campus.

(2) Poverty level based on the percentage of students eligible for a free or reduced lunch under the (NSLP)

Ninety-eight percent (98%) of our student population receives for free or reduced price lunch.

(3) Financial need of the school including any additional budgetary hardships, notwithstanding the school current discount rate

Without financial support, ReNEW is unable to provide additional Internet service for the Wireless Program due to the cost of the additional wireless service and overdrive devices. At $50/month per child, per wireless overdrive, the additional cost to connect 550 computers is $27,500 per month, or $330,000 per year. ReNEW has plenty of student laptops available and prepared for full implementation of the program when funds become available to support additional wireless service.

(4) Costs, including those eligible for E-rate support and not eligible for E-rate support, associated with implementing the Wireless Program, including but not limited to costs for equipment such as e-readers or laptops, access and connection charges, teacher training, or student/parent training

Each of 600 student laptops for use at home costs approximately $150, for a total of $90,000. Overdrive devices, as part of a package with service, cost about $1 each, for a total of $600. Wireless service costs $50 per overdrive per month. For 600 devices, wireless service costs $30,000 per month, or $360,000 per year. Backpacks for the transportation of student laptops and overdrives cost $5 each, for a total of $3000 for 600. Printing of one-page instructions and reminders to accompany each laptop check out for home use cost approximately $100. Finally, technology team staff spends between 10% and 20% of their daily time implementing this program. With three staff members earning $70,000 (10% of time on Wireless Program) $50,000 (10% of time spent on Wireless Program) and $40,000 (20% of time spent on Wireless Program), the total salary resources toward implementing this project is $20,000.

(5) Committed school resources available to implement the entire Wireless Program, including whether those funds are from the school's general budget or an outside funding source

The 600 student laptops for use at home are dedicated solely to the Wireless Program. They are previously used, and were donated to ReNEW by the neighboring Recover School District in June 1, 2010. The current 50 overdrive devices and wireless services for each is paid for with ReNEW funds from the general school budget, under a line item dedicated for technology. E-rate support is critical to expand this component of the program to support off-site connectivity for an additional 550 laptops. Backpacks were donated for the Wireless program by the Lion of Judah conference that visited ReNEW Schools in October, 2011. Printing of one-page instructions and reminders will be paid out of the school general budget. Staff time and effort on implementing the Wireless Program is a required activity performed by the technology team. The $20,000 of their daily time spent implementing the Wireless Program is funded by both the Charter Management Organization (CMO) funds and school funds in the school personnel salaries.

(6) The effect EDU2011 support for off-premise connectivity is likely to have upon the school's projects

EDU2011 will allow ReNEW to provide wireless Internet access off campus for another 550 third through eighth graders. This will assist the district in working toward its goal of getting all students academically on level by providing them with more time engaged in Internet-accessible approved learning programs.

(7) Analysis of the cost-effectiveness of the current or planned Wireless Program as compared to the use of other types of technology that would also meet the Program's objectives

Due to security issues, use of broadband cards, which were comparable in cost to overdrives, were abandoned. A second alternative to use of overdrives is to install a cable modem in each child's home and create a point-to point network, extending ReNEW's network into their homes. The cost of the cable modem installations, and upgrade of additional bandwidth ($5400 per month), plus equipment purchase and rental ($50,000) was too costly. Even before gathering specific costs on cable installation, it was clear that this connectivity technology was not viable. The logistics of installation and setup, maintenance, and monitoring, were assessed to be too much to manage with the current technology team, requiring additional staff to manage the 600 point-to-point network. Cable modems are also not feasible for families that enroll and withdraw students throughout the school year, as equipment would have to be installed and uninstalled frequently.

(8) Any relevant technology planning documents and, if applicable, a statement of long-term objectives for the Program

Long-term objectives for the Wireless Program include closing the student achievement gap of ReNEW students compared with Louisiana's students as a whole, by providing more time on task with approved learning programs. ReNEW would like the Wireless Program to grow over time, in the number of students being served. We seek not only to boost the number of devices available for offsite connectivity, but also increase the interest and demand among current students and families. Another long-term objective of the program is to differentiate learning for each child by providing prescriptive learning programs matched to each child's academic strengths and weaknesses. The Wireless Program will increase the number of students performing at grade level or above in Math and English Language Arts by 10% each year. Finally, a long term goal of the Wireless Program is to be streamlined and replicable to be implemented as ReNEW transforms additional low-performing schools into charters, starting with three new schools in 2011-2012 and growing to 15 total ReNEW schools over the next 5 years.

(9) Description of the specific measures taken to ensure compliance with the Children's Internet Protection Act and measures to protect against waste, fraud, and abuse

The technology team learned that the initial use of mobile broadband cards worked great to provide off-campus access to the Internet. However, they could also be removed and put into non-approved devices, allowing for abuse and waste. There was no way for ReNEW to monitor the use of the cards on non-approved websites. The team also initially did not lock down student laptop computers, so students had open access. The technology team fixed this issue by initiating Internet security within the browser, through the parental controls.

While each ReNEW computer, including those in the Wireless Program, has Lightspeed content filtering software loaded to protect students from harmful and inappropriate content and comply with CIPA, its use in offsite student laptops is redundant. Each student laptop is white listed, having very strict Internet controls set to allow student access to only those sites approved by the school district. These include access to Plato, River Deep, KidBiz 3000, Phonics Blitz and Boost, First in Math, and Study Island. Through Internet controls, the technology team locked computers and created student accounts that prohibit access to system settings. Additionally, the use of overdrives allows the technology team to password-activate them, matching specific overdrives to individual, secure, approved laptops only, thus cutting back on waste and abuse. ReNEW's overdrives will not work with other unrestricted devices the student may have at home or in the larger community. Through the Internet, the technology team remotely manages overdrive devices and monitors Internet use of ReNEW's take-home laptops to identify security breaches and misuse and shut down access if necessary. Internet access and

time monitoring helps inform school policy as personnel study the usage habits of student users. ReNEW has enlisted AmeriCorps volunteers to help with weekly monitoring of student off-site Internet use.

Finally, each parent pays a $75 refundable deposit to ensure that laptop devices and overdrives are returned to the school district following a checkout period. Serial numbers from each device are used to confirm return and inventory.

(10) Description of internal policies and enforcement procedures governing acceptable use of the wireless devices used in the Program off the school premises.

ReNEW implements strict security on each laptop that students take home, allowing access only to ReNEW approved web learning sites: KidBiz 3000, Phonics Blitz and Boost, Riverdeep, First in Math, Study Island, and Plato. The use of a password to match each overdrive device to a specific student laptop makes it almost impossible for students or parents to use the devices in any other way than those intended by the school district. At the time of checkout, parents and students sign a permission slip that outlines expectations and consequences for misuse or damage to the laptop or wireless overdrive device. The technology team remotely monitors access and usage, and can turn off individual overdrive devices should a problem arise. Those students who abuse the purpose of checking out a laptop for home use are flagged by the technology team and reported to Instructional Leaders. For example, if a student logged onto his laptop and remained connected to the Internet for 12 hours, but he only spent 3 hours engaged in learning software activities, he either spent time pretending to study or did something else while the laptop was still connected.

Required Information for schools:

(1) School location

SciTech Academy is located at 820 Jackson Avenue, New Orleans, LA 70130.
DR Batiste Cultural Arts Academy is located at 3128 Constance Street, New Orleans, LA 70115.

(2) Name of the school applicant, individual schools and their billing entities

The applicant is ReNEW School District, and the district billing entity number is 16061227. The two schools that will be served by the EDU2011 Wireless Pilot Program are SciTech Academy, billed entity number 16061203, and DR Batiste Cultural Arts Academy, billed entity number 16061204.

(3) Description of the school/district, including type

ReNEW-Reinventing Education (ReNEW Schools) is a charter management organization (CMO) that runs two public, open-admissions charter schools. The mission of ReNEW Schools is to turn around low performing schools and transform them into high performing, college preparatory programs. We believe that every student deserves the opportunity for a college education, and it is ReNEW's adults who must do whatever it takes to make students prepared. ReNEW's two schools serve K-8 students from across New Orleans. The majority of our students are African American, and 98% of ReNEW students receive free or reduced lunch. Eighty percent (80%) are academically behind in core subjects, so the district has implemented extended school day, weekend and holiday school, and extended school year in an effort to give students more time in learning. In 2011-2012 school year, ReNEW will expand by three schools, again targeting the city's lowest performing and transforming them into open-enrollment charters, this time including high school students. Over the course of 5 years, we anticipate expanding to a total of 15 schools. We plan to use the Wireless Program model in all of ReNEW's schools.

(4) Program's curriculum objectives, the grade levels, number of students served

The goal of ReNEW Schools is to turn around low performing schools and make them into high-performing, college preparatory programs. A main focus is to get the 80% of academically behind students back on grade level, so they can be successful in high school, college, and future careers. The Wireless Pilot Program is focused on students in grades 3-8, and has several curricular objectives that support ReNEW's overall mission. Objective 1: Increase the number of students in grades 3-8 who are able to participate in the Wireless Pilot Program from 50 to 600 by providing extra overdrive units and connectivity service. Objective 2: Provide 2 to 20 hours of extra learning time per week for students in grades 3-8 to spend directly engaged in math and ELA/literacy by increasing off-campus access to Internet-based learning programs: Plato, Riverdeep, Study Island, First in Math, Phonics Blitz and Boost, and KidBiz 3000. Objective 3: Provide customized learning plans and activities to 100% of students in grades 3-8 who participate in the Pilot Program. Objective 3: Increase literacy, ELA, and math achievement in 3^{rd}-8^{th} grade Pilot Program students by 10%, as measured by incremental increases in their skill mastery documented by Internet learning programs' built-in reports.

(5) Summary of any data collected by the school on Program outcomes and achievement of Program objectives.

Preliminary data is both exciting and provides room for growth. There is no doubt that access to high-quality Internet learning sites, approved by the district, helps to increase student knowledge and skills in core subjects as they spend time working in those programs. Our longest off-site student, a 7th grader, working primarily in Plato, showed an average completion of 4 tutorials and mastery of 11 skills per subject per day. His average time spent to watch the tutorials and master these skills is 1 hour, 30 minutes per subject. He has mastered approximately 18 ELA modules per semester. According to Plato's real-time reporting, ReNEW can forecast that he will score mastery or advanced (the highest of 5 tiers) in ELA on Louisiana's annual standardized iLEAP test. We can also determine his academic strengths and weaknesses from real time reports on his progress. For example, this student has shown weak achievement, scoring *Unsatisfactory* in the 0-20% range, of the following math Louisiana Grade Level Expectations (GLEs): Data Analysis GLE 36, Geometry GLEs 25, 28, 29, and 30, Algebra GLEs 12 and 15, Number and Number Relations GLEs 6, 3, 5, and 7. A strength in math is Data Analysis, where he scored *Advanced* with a score of 100%.

Preliminary data from the 50 laptops being used in the Wireless Program also demonstrated a clear trend. Students either engaged in educational activities, at an average rate of 6.5 hours over the course of 9 days, or they took laptops and overdrives home and did not utilize them. Forty percent (40%) of students engaged in learning activities during the Thanksgiving check out period, while 60% of students who took them home logged to complete 1 hour or less of learning activities. Only 3 students who took laptops home showed discontinuities between the number of hours connected to the Internet and the number of hours logged onto one or more of the 7 approved web-based programs. So while the opportunity for students is great, ReNEW needs to improve its relationships with students and parents and stress the value of spending additional learning time on weekends and holidays as an important step in moving children to grade level. To date no devices have been lost or damaged, and no connectivity or security issues have been reported.